Electrical World

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A Power Executive from the Mountain States says:

"With constantly increasing operating costs, it seems apparent that further economies must be found in possible reduction in investment charges, and repetitive manufacturing appears to offer considerable promise in this direction."

UTILITY executives the country over are in full agreement as to the need for lower investment charges. And more and more of them are concurring with General Electric that these reductions can come from repetitive manufacture. "In my opinion," this executive goes on to say, "there would be a number of additional benefits to our company from repetitive manufacture . . ." Savings in installation cost, inventory, and maintenance expense are among them.

G.E. has made a realistic proposal to bring about these economies: We will do our best to offer more and more power apparatus in modern, widely applicable designs. By repetitive production of these designs, we will be able to give you *greater value* per dollar of investment cost.

At the same time, we will work continually for fundamental improvements, so that new models of constantly increased efficiency and greater reliability can be expected.

If the objective is to be reached, however, your part is as essential as our own. It may be necessary to forego individual design preferences so that manufacture can be fully repetitive—to accept minor limitations for the sake of major gains.

That is why we shall appreciate frank and thorough consideration of these policies by you and your associates. Working together, we can move faster and farther toward greater economy in power production. *General Electric Company, Schenectady, N. Y.*

GENERAL ELECTRIC

201-165-170

The best investment in the world is in this country's future—BUY WAR BONDS

Electrical World

NEWS ISSUE

Volume 120, Number 23 December 4, 1943

Annual A.S.M.E. Meeting Opens in New York City

Industrialists hold spotlight in opening sessions of engineering conclave — J. F. Lincoln makes plea for incentive pay — Col. Chevalier of McGraw-Hill in important address

With impressive and appropriate ceremonies, the 64th annual meeting of the American Society of Mechanical Engineers was being held this week in New York.

Throughout the week an elaborate program was being carried out, including executive meetings, luncheons and speeches by men prominent in the field of industry. Such well-known figures as Charles S. Gotwals, quality manager, SKF Industries, Philadelphia; Lawrence A. Appley, deputy chairman and executive director, War Manpower Commission, Washington; Col. Willard Chevalier, vice-president of McGraw-Hill Publishing Co., New York, and James F. Lincoln, president Lincoln Electric Co., Cleveland, were among the array of important personalities presented to the meeting as speakers.

Applied Incentives Needed

At a session devoted to a survey of "Incentives Under Wartime Conditions," under the auspices of the management division of the society, Mr. Lincoln said: "The next step forward in the industrial system is properly applied incentives which will make all workers equally interested in the success of the organization with which they are connected. Properly applied incentives have already increased productive capacities to an unbelievable extent. In those places where labor and management have arrived at an arrangement of complete co-operation, production rates more than four times that in other plants where incentive is absent are usual. The foundation of any incentive payment is to make the worker feel that he is part of the team and profits proportionately from the success of the organization."

In an address to the delegates to the convention earlier in the week Colonel Chevalier pointed out the danger inherent in the proposal made in some post-war plans of having the government absorb those for whom private enterprise cannot find jobs. Such a "mixed economy" might abolish unemployment as it has done in Germany or Russia, where unemployment insurance was done away with ten years ago. But it would also do away with freedom.

"That's why," he said, "those who are today concerned with jobs as a by-product of expanding production are looking forward to an expansion of our system of social security, including unemployment insurance. For in a free economy, under conditions of free competition, periods of adjustment which cause serious unemployment in certain regions or industries are inevitable."

Challenge to Business

However, Colonel Chevalier explained that unemployment insurance and other social insurance plans cannot solve the main problem ahead, that of establishing and maintaining high levels of production and employment. To solve this problem is the challenge to business today.

"As of November 20, 1943, 1,140 community chairmen have been appointed by the Committee for Economic Development in the United States," he continued. "The average number of volunteer businessmen working on a CED Community Committee will total anywhere from ten to 300, depending on the size of the city. In Philadelphia, for instance, the Action Committee (a subcommittee) alone totals 100 men.

Gates Elected President

Robert M. Gates, president of the Air Preheater Corp., New York, and authority on steam generation and industrial management, was elected president of A.S.M.E. He succeeds Harold V. Coes of New York.

Vice-presidents elected are: David W. R. Morgan, manager Condenser Pump and Blower Division, Westinghouse Electric & Manufacturing Co., Essington, Pa.; Jonathan A. Noyes, district manager Sullivan Machinery Co., Dallas, Texas; Ford L. Wilkinson, Jr., dean of engineering, Speed Scientific School, University of Louisville, Louisville, Ky.; and Rudolph F. Gagg, assistant to the general manager, Wright Aeronautical Corp., Paterson, N. J.

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REA Probe Funds OK'd

The Senate committee on agriculture and forestry has reported favorably an amended resolution asking $2,500 for an investigation of the Rural Electrification Administration (ELECTRICAL WORLD, November 20, 1943, page 5);

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The measure was referred again to the committee on audit and control of the contingent expenses of the Senate.

The agriculture committee report asked that immediate action be taken on the resolution so that the investigation "to the end that the marvelous work of the Rural Electrification Administration will continue" may begin.

It is expected that the agricultural committee will attempt first to justify the more thorough investigation which was anticipated by the original resolution asking $15,000 for the probe.

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Father Draft Bill Slated for Veto

Washington observers predicted this week that the President will veto the father draft bill passed recently by the Senate and sent to the White House in an attempt to remove all jurisdiction over inductions into the armed services from War Manpower Administrator Paul V. McNutt.

The bill placed fathers at the end of the draft list. This is actually a formality only, since most draft boards had done this on their own volition, according to selective service spokesmen in Washington. In addition, it nullified the "war work or fight" provisions of McNutt's program certifying certain jobs as non-deferrable.

McNutt was reported as agreeing with all provisions of the bill except that removing selective service from his jurisdiction. It was suggested that the President might veto the bill and then institute all provisions, but this is an executive order. McNutt reiterated his long-standing contention that military manpower is part of the total national manpower pool, and that authority over the total pool must not be divided.

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OWU Orders Holdup on Meter Purchases

Regional utility engineers have been instructed by the Office of War Utilities to defer action on requests by utilities to purchase new watt-hour meters under amended Order L-151 until WPB has delegated them authority to process such applications.

Due to the scarcity of meters in manufacturers' stocks, quotas have been assigned each region. No cyclometer type meters are available. OWU authorized the release of 5,225 standard domestic meters in December. It is believed that most of the remaining new meters are three-wire, A-base, indoor meters.

KEEPING UP WITH CONSERVATION

OWU HAS RECEIVED from the Edison Electric Institute a second clipping book containing advertisements from all sections of the country in which electric companies urge conservation. Several photographs of the "before and after" type are included, one of which shows a huge billboard bearing a "stop wasting electricity" message. The sign is so thoroughly lit up as to be visible for miles.

If you don't need it...
Turn it Out
SAVE ELECTRICITY
TO SAVE COAL, MANPOWER, TRANSPORTATION
The Dayton Power and Light Company

CONSERVATION AD—A striking example of black-and-white copy in Dayton Power & Light's current conservation campaign

PHILADELPHIA ELECTRIC CO. recently submitted to the Office of War Utilities a detailed statement of its activities in connection with the conservation campaign. The list showed that, among other activities, the company sent letters to each of 5,800 employees outlining the campaign in detail. Sixty addresses have been delivered by employees to civic and business organizations in the Philadelphia district, and sales personnel have interviewed 27,581 customers relative to the campaign.

Letters soliciting support went to 440 mayors, school board presidents and other heads of municipal subdivisions in the area. Electric conservation circulars went to 141,000 persons and companies, and 41,000 gas customers received similar gas circulars. Seven magazine articles were published locally, and continuing advertising programs were maintained in newspapers and on radio stations. Showroom signs, window posters, car cards and other display media also were used extensively, OWU officials pointed out that the company's efforts brought results, even though merchants have since relaxed in protest against non-compliance elsewhere.

A DOMESTIC CONSUMER of the Peoples Gas Light & Coke Corp. of Chicago recently returned a conservation pledge card with a note promising his full support, but asking what good it would do for him to save a few thousand b.t.u's yearly when millions were being wasted on advertising signs, white-way lighting and excessive lighting in public transportation vehicles.

MINNEAPOLIS RADIO STATIONS, newspapers, transportation, communications and other utilities and industrial concerns are represented on the city's "conserve critical materials" committee, an outgrowth of the OWU campaign to organize local interindustry committees to co-ordinate the conservation campaign. The Northern States Power Co. estimated in a report to the committee that it had saved 100 tons of coal in October through reductions in use by domestic and commercial customers alone; the estimate was based on reductions in October revenue from these sources.

THE OFFICE OF WAR UTILITIES has figured out some "war statistics" which can be used to impress on electric consumers the real need for saving electricity. It finds, for instance, that if every electric consumer in the land would save one kw.-hr. of energy, they would save 25,000 tons of coal, or enough electric energy to make:

(1) Aluminum for 150 medium bombers.
(2) Aluminum for 330 single-engined fighters.
(3) More than five destroyers.
(4) 1,300 single-engined fighters.
(5) 570 medium tanks.

Every 10 kw.-hr. of energy saved, the statistics show, is equivalent to the electricity needed to produce copper for:

(1) 2,000 .30-cal. cartridge cases.
(2) More than 400 .50-cal. cartridge cases.
(3) Twenty 75 mm. shell cases.
(4) Ten 105 mm. shell cases.

Ten kw.-hr. of electric energy is equivalent to the amount of electricity needed to make the magnesium in one incendiary bomb.

RETAILERS' ASSOCIATIONS of St. Louis and Illinois have approved and distributed statements urging their members to co-operate wholeheartedly in the voluntary electric conservation program.

CMP Regulation Releases Materials to Repairmen

Plan will give vitally needed materials to repairmen, while new War Manpower Commission and National Refrigeration War Council program will provide new manpower to the industry.

Repairmen, including electricians and electrical appliance servicemen, may obtain specified amounts of controlled materials automatically under CMP Regulation 9A, the War Production Board announced last week.

Under the regulation, which replaces CMP Reg. 9 as far as repairmen are concerned, repairmen may obtain in each calendar quarter up to 20 tons of carbon and alloy steel, 500 pounds of copper and copper base alloy brass mill and foundry products and 200 pounds of aluminum. In addition, refrigerator, radio and domestic appliance repairmen, electricians and electrical contractors may buy $150 worth of copper wire each quarter or one-eighth of the amount of copper wire used for repairs in 1941 (figured by dollar volume), whichever is greater. Repairmen may also buy as much other material and repair parts as are needed for repair and maintenance work.

Higher Ratings May Be Used

Repairmen working for persons authorized to use a rating better than AA-3 for non-controlled maintenance and repair materials may use such better rating to buy what is needed for such work or to replace their own stock expended on such work. Repairmen doing work primarily of an industrial nature may, by special application to WPB, receive permission to buy up to a ton of copper wire and copper or copper base alloy foundry and brass mill products. Inventories are limited to a supply necessary to carry on repair work for 60 days. Copper wire inventory is limited to a 15 days supply, except that if it is below this figure a repairman may accept the smallest commercial-size lot even though it will take him over the 15-day limit. Repairmen may not use this material to make repair parts for sale to others.

Manpower Program Launched

A program to replace highly skilled refrigerator servicemen who have been drafted or otherwise drained off, leaving the industry with only one-fourth of the servicemen available in peacetime, has been inaugurated by the War Manpower Commission in conjunction with the National Refrigeration War Council.

The program, in establishing which locality the Council of Electric Operating Companies is assisting, will offer three types of training. Supplementary evening courses combined with orderly, "on-the-job" and upgrading training will be offered new workers. Full-time training under the vocational training for war production workers program will be offered paid employees on payrolls of local contractors and special vocational programs for high-school seniors, within regular school vocational programs, will be made available to students, who will thus be able to enter active work on graduation.

A standard course entailing 200 hours of classroom and laboratory work will be used. In addition, major colleges will offer short, college-level courses running from 10 to 16 weeks for high-school graduates. Instructors, supplied by the industry and paid by the government, will be trained according to WMC Training Within Industry Program standards.

The training programs will be administered locally by local emergency refrigeration service councils to be organized by temporary coordinators. CEOC has asked its members to select such temporary coordinators who will serve until councils are organized and can choose their own heads. If successful, the plan may be extended to cover other essential appliances.

Propose Excise Tax on Gross Revenues

Detroit's Common Council was scheduled to meet on Tuesday of this week to pass upon the proposal, advanced by the City Corporation Council, to levy a 20 percent excise ordinance tax on gross revenues of privately owned utility companies. Purpose of the tax, according to Paul H. Krause, the corporation counsel, is to divert federal excess profits taxes, now going to Washington, back to Detroit.

Alfred C. Marshall, president of Detroit Edison Co., declared that imposition of the proposed tax would require a 25 percent increase in rates to consumers, or nearly $13,000,000 a year. "If the excise tax ordinance should become effective it would reduce the company's net earnings by $1,900,000 per year," Mr. Marshall said. "In view of the fact that the company last year earned only 4¾ percent on a property valuation fixed by the city's own experts

LIGHTING DOUBLES PRODUCTION—An increase from an average of 10 to 65 ft.-candles at the working level in the metal fittings department of the Hughes Aircraft Co., in southern California, doubled production at the division, according to Claude C. Slate, manager. Lighting fixtures are by Westinghouse and are mounted 12 ft. from the floor, 6 ft. apart in the row, with rows 8½ ft. apart. A total of 557 fixtures containing 1,671 lamps were installed in plant and office

Nazis and Japs Destroy Libraries, Americans Restore Them

If you have back numbers of ELECTRICAL WORLD in complete or broken files you can help to restore the libraries of lands devastated and impoverished by war. The American Library Association is accumulating now a vast stock of technical journals, particularly those numbers published during the war years, to be used in rehabilitation of libraries in war areas. If you want to contribute your back numbers of ELECTRICAL WORLD to this cause write to Dorothy J. Comins, Executive Assistant, Committee on Aid to Libraries in War Areas, Library of Congress Annex, Study 251, Washington 25, D. C. State what numbers or complete annual sets you have and you will be instructed as to their disposal.

in the recent rate case, it is plainly evident that the company could not stand such a loss in revenues and would therefore be forced to ask the state commission for higher rates. To get the $1,900,000 back would require a rate increase amounting to $12,700,000 annually for the reason that out of every dollar of this added money received from the public in revenue only 15 cents goes to the company and the other 85 cents goes for taxes . . ."

The excise tax proposal is an outgrowth of a recent rate case in which the city endeavored to obtain rate reductions to eliminate the utility's excess profits tax payments to the government. The Michigan Public Service Commission backed up the utility in that case.

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Boehm Files Suit Charging Defamation

Three suits seeking a total of $24,500,000 damages have been filed against the North American Co., Union Electric Co. of Missouri and others by Frank J. Boehm, former executive vice-president of Union Electric, a subsidiary of North American. Boehm charges that he went to prison because, at the bidding of his superiors, he gave false testimony in the Securities and Exchange commission's investigation of the utilities, and that he was defamed in suits filed against him by Union Electric and two of its subsidiaries, Mississippi River Power Co. and Union Electric of Illinois. The latter suits asked for an accounting and restitution of money used for political purposes.

Boehm was convicted on charges of perjury and was paroled last March after President Roosevelt commuted his five-year term to two years.

In the meantime Louis H. Egan, 61, former president of Union Electric of Missouri, has applied to U. S. District Judge George H. Moore for probation, asserting that if he is compelled to serve the two-year prison term imposed upon him for violating the corrupt practices section of the Holding Company Act his life and health would be endangered. The court set December 4 for a hearing on the request.

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Coal Production Hits 16-Year Record High

Bituminous coal production hit a 16-year record high during the week ended November 20, according to Solid Fuels Administrator Harold L. Ickes. The 12,700,000-ton mark was established in the first full week of operation under the new contract negotiated with the United Mine Workers of America by Ickes.

Ickes asserted that the showing bore out his contention that a contract was the principal thing needed to obtain full production and the contract was satisfactory to the miners. He warned that production would have to hit even higher levels and hold them for months to relieve the coal shortage which developed through the last eight months of strife over an operator-UMW contract.

Total for the week ended November 27 was not expected to equal that of the previous week because of the Thanksgiving holiday. OWU officials agreed that production figures for this and the next two or three weeks would give an indication of the future over-all coal supply situation. If these full weeks show figures comparable to or better than the week ended November 20, they point out, the future can be faced with equanimity even though there will still be a current shortage of coal in terms of peacetime practices. They reported several occurrences which showed local relaxations in the stringent utility coal supply picture, but added that these instances are as yet too few and too scattered to indicate any trend toward an easing of the coal supply picture.

Vancouver Gets 30-Day Free Service

Residents of Vancouver, B. C., and the lower mainland area of British Columbia will receive free electricity for the billing period of November 1 to December 18 from the British Columbia Electric Railway Company by order of the Public Utilities Commission of the Province of British Columbia, and which has been authorized by an order in-council passed by the B. C. Cabinet at Victoria. Free light and power is also made available for varying periods to residents in other areas served by the B. C. Electric.

W. G. Murrin, president of the B. C. Electric, estimates the free service will represent between $900,000 and $1,000,000. All domestic power consumers in the province are included in that estimate. It is announced that the Dominion Government will not stand between the B. C. consumers and the $1,000,000 they will save through cancellation of their bills by the provincial Public Utilities Commission. The bonus comes out of company taxes which would otherwise find its way to the federal revenue coffers.

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Goal of 500,000 Water Systems Set

With the object of assuring the production of about 500,000 electric water systems in the first year after the war a comprehensive industry-wide program of post-war planning was adopted at a meeting of the National Association of Domestic and Farm Pumping Equipment and Allied Products Manufacturers at the annual meeting, held recently in Chicago.

The goal of the program represents a substantial increase in the production of electric water systems over the peak pre-war year of 1941, when more than 347,000 electric water systems were manufactured and sold, according to Herbert C. Angster, secretary-director.

In explaining the significance of the post-war plans of the water system manufacturers to dealers and distributors, Mr. Angster said:

"Some years ago, when water system sales were running around 100,000 a year, the Electric Water Systems Council adopted a program which called for the production and sale of 250,000 water systems at the end of the five year period. We set our sights high yet this goal was met and surpassed in 1940, when more than 260,000 electric water systems were sold, and

...as surpassed in 1941, when 347,000 ...ystems were sold.

"We could not have reached our ...oals in 1940 and 1941 without the help ...f dealers and distributors. We will ...eed the help of dealers in the new ...ost-war program . . ."

The recommendations for post-war ...lanning adopted by the domestic and ...arm water supply industry were drawn ...p by a committee consisting of C. D. ...eiter, sales manager, F. E. Myers ... Bro. Co., chairman; Karl M. Brower, ...les manager, Dayton Pump & Manu...acturing Co.; Henry T. Park, vice-...resident, Flint & Walling Manufactur...ng Co.; and Walter Deming, treasurer, ...he Deming Co.

The following officers were elected ...y the National Association of Domes...ic and Farm Pumping Equipment and ...llied Products Manufacturers at the ...eeting: L. E. Wilson, president, ...Everite Pump & Manufacturing Co., ...Lancaster, Pa., president; W. T. Hat...maker, president Duro Co., Dayton, ...Ohio, vice-president; John P. Curtin, ...ice-president George D. Roper Corp., ...reasurer, and Herbert C. Angster, sec...retary-director.

REA Co-operatives Face Federal Income Tax

Labor leaders see attempt to "coerce" unions — Knutson expresses opinion that it should have become law long ago — Would override previous legislation exempting co-ops from taxation

The possibility of federal taxation of the earned income of Rural Electrification Administration co-operatives was before a Senate committee this week as the tax bill, containing a provision for accounting of income by tax-exempt organizations, went to the upper chamber after approval by the House.

Assailed by labor leaders as a "sleeper," the provision would require annual returns stating items of gross income, receipts and disbursements of tax-exempt organizations excepting religious, charitable and educational organizations. Labor leaders saw in it an attempt to "coerce" unions, and, after having missed the provision in hearings before the House ways and means committee, launched a vigorous campaign against it in the press and before the Senate.

An Agriculture Department official expressed the opinion informally that the provision would apply to REA co-ops, which do not now pay federal taxes on their earnings, if the provision finally becomes law. It was pointed out that the provision does not impose any taxes of itself.

Rep. Harold Knutson, Minnesota Republican and ranking minority member of the ways and means committee, said the provision was inserted in the bill in good faith as a means of finding sources of more federal revenue. He saw no reason why it should not be adopted and expressed the opinion that it should have been made law years ago. He told ELECTRICAL WORLD that "anybody, co-op or private organization, should be required to contribute to the war and the expenses of government" if circumstances warrant. He cited a recent purchase for $15,000,000 of an oil refinery by a mid-western farmers' co-op and added:

"The organization which can pay that kind of money should not be listed as a pauper for tax purposes."

Expect Congress Opposition

Any attempt to impose taxes on co-ops as a result of information elicited by the proposal would have to be written into subsequent tax bills, and undoubtedly would run into vigorous opposition in Congress. Knutson expressed the opinion, however, that if such taxes were imposed, they would override any previous legislation exempting co-ops from paying federal taxes.

Other committee members stressed the point that in certain cases tax-exempt organizations operate for profit directly in competition with tax-paying commercial or industrial companies. Most often cited example was in the ownership of real estate by tax-exempt organizations, which rent part or all of it in competition with tax-paying real estate companies. A similar situation exists in numerous instances in relations between REA co-ops and private electric utilities. Several representatives expressed the opinion that all such cases should be publicized, and declared that such was the intention.

FROM THE "FIVE AND TEN"—In the recent Third War Loan Drive the United Illuminating Co., New Haven and Bridgeport, Conn., ran a striking pair of window displays in these cities featuring a simulated war bond 6 ft. square with an opening in the center where the cost of six armament units was displayed in rotation, prices being expressed in the number of $25 bonds required for each piece of equipment. At the base of the window a typical invasion scene was set up with war vessels off shore, tanks, and plastic soldiers on land made from 5-and-10-cent store stocks. A 60-watt motor turned the display on a 6-ft. diameter disk which automatically stopped for about eight seconds for each unit featured

Associated Gas Plan Meets With Approval

SEC Utilities Division OK's plan providing for the capitalization of the reorganized company to comprise senior debt of $7,500,000, new debentures of $7,400,000 and 7,500,000 shares of common stock

With the approval last week by the public utilities division of the Securities and Exchange Commission of a plan of reorganization submitted by the trustees of Associated Gas & Electric Co. and Associated Gas & Electric Corp., litigation involving this large holding company system advanced a step nearer ultimate conclusion.

Usually, although not necessarily, an approval by the division is followed by the approval of the SEC, and in this case the commission will hear oral arguments on the proposed findings by the division staff on December 17. If such a procedure is carried out without delay, it is possible that the plan may be before the Federal District Court in New York early in the new year.

Plan is Outlined

The plan, filed in the latter part of June and subsequently amended, provides for the capitalization of the reorganized company to comprise a new senior debt of $7,500,000, new debentures of $7,400,000 and 7,500,000 shares of $5 par value common stock. The holders of all outstanding securities of the two systems, except for ten issues, would share in the distribution of the new securities, and the original owners of some of the non-participating securities would be allocated a portion of the new securities.

It proposes that the two top companies, together with the NY PA NJ Utilities Co. and certain other corporations in the system, be merged and acquire the assets of the two estates.

The new senior debt would be represented by a bank loan maturing in five years and amortized over the five-year period in approximately equal annual installments. The new debentures would be issued to the holders of the 8s of '40 of Associated Gas & Electric Corp. and would mature in ten years, bearing interest at 4¼ percent, and would be junior to not more than $15,000,000 of senior debt. The debentures would be unsecured, and all of them would be retired within ten years. The new common stock would have one vote per share for all purposes.

Cash Payments Provided

Administration expenses, Associated Co.'s trustees' certificates and taxes are to be paid in cash. This includes an offer to pay $750,000 in full settlement of all liability for federal taxes, including all penalties and interest, claimed from the two top companies or their trustees in respect of all the taxable years, 1934 to 1939, inclusive.

General creditors of the two estates, including holders of all debt securities of the two companies and holders of the preferred and preference stock of Associated Co., who received those shares in exchange for convertible debenture certificates are to receive shares of common stock in accordance with allocations determined by the so-called "recap" compromise.

The "recap" compromise constituted the only contribution to the plan made by Howard C. Hopson, now serving a five-year term for a $20,000,000 mail fraud.

I.C.I. CONFERENCE—Officers of the newly formed Indoor Climate Institute get together at a joint meeting of the board of directors and the advisory council at a recent Chicago conference. Left to right: First vice-president T. A. Crawford, Timken Silent Automatic; president Paul B. Zimmerman, Airtemp Division of Chrysler Corp.; secretary R. E. Moore, Bell & Gossett; treasurer E. N. McDonnell, McDonnell & Miller, and second vice-president L. N. Hunter, National Radiator

FPC Sets Hearing on Waterville Project

Federal Power Commission has set hearing on the matters involved in the determination of the actual legitimate original cost of the Waterville hydroelectric project, Carolina Power & Light Co., Raleigh, N. C., licensee, for January 12 in Washington, D. C.

The order states that the hearing will be held to determine "the actual legitimate original cost of the initial project, as of February 28, 1931, and the property changes in the project for the period March 1, 1931, to December 31, 1932, and the accounting to be prescribed therefor, including the disposition on the books of account of said licensee of such amounts as may be disallowed as not part of such actual legitimate original cost."

The Waterville project is located on the Big Pigeon River and has an installed capacity of 108,000 kw.

City Drops Plan to Buy Utility Properties

By a vote of six to one, the Helena (Ark.) City Council defeated recently the plan of Mayor D. T. Hargrave to buy the local properties of the Arkansas Utilities Co.

The vote was on a resolution sponsored by a "Citizens Committee" and introduced before the council several weeks ago. The council's action, subject to a veto by Mayor Hargrave, is expected to bring to a close, for the present at least, any possibility of a vote by Helena residents on municipal ownership, and any test of the legality of the proposed issuance of revenue bonds with which to finance the purchase of electric and gas properties.

The resolution stated that this is not the opportune time for the city to acquire the gas and electric properties, but approved negotiations for the purchase of the water facilities. Indirectly, the council also approved the leasing of the properties by the Arkansas Power & Light Co.

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P. G. & E. Sells Sacramento Railway

Sale by Pacific Gas & Electric Co. of the Sacramento, Calif., street railway and bus system to the Pacific City Lines, Inc., with the new owners taking over as of November 1, 1943, completely retires Pacific Gas from the transportation business in its territory. The sale, approved by the California Railroad Commission, transfers all principal assets to the new owners, including street car tracks, car barns and shops, 33 street cars and 60 buses, for a consideration of $450,000.

A franchise granted to Pacific City Lines after some agitation for municipal operation contains an option giving the city the right to buy the property any time within two years at the sale price mentioned, plus 10 percent, and certain expenses, less depreciation. Pacific City Lines, Inc., with main offices in Oakland, Calif., is headed by J. L. Haugh as president, who for many years was with the Union Pacific, last holding the position of vice-president.

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Material Used Less Under Order U-1

Material consumption for maintenance, repair and operating supplies and for minor construction by utilities operating under Order U-I is only half that used in 1940, the Office of War Utilities reported last week.

This reduction in materials use, which does not include any account of material price increases since 1940, was made in the face of heavy increases in system output, which, for the electric industry, totals 52 percent.

YALE & TOWNE "E"—The Army-Navy "E" award has been given to the Yale & Towne Manufacturing Co.'s Philadelphia division. In the picture President W. Gibson Carey, Jr., receives the "E" award insigna from Lieut. T. E. Lapres, USNR

Consumption of wire, cable and busbar by electric companies was cut from $29,000,000 in 1940 to $8,000,000 this year, of which only 12 percent is obtained from wire mills, the remainder coming from inventory and plant salvage. Only 55 percent of the MRO material used by all utilities under U-1 came from suppliers, 33 percent coming from salvage and 12 percent from inventory. Electric utility reduction in materials used for MRO purposes from 1940 uses totals $66,300,000 this year.

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Water Supply Decline Shows Substation Need

Gradual decline of the water supply at The Pinnacles, as a result of a long fall drought, has redirected attention in Danville, Va., to the construction of a substation which will enable Appalachian Electric Power Co. to step down its primary current from 32,000 volts to city service requirements.

Danville at present has 42 percent of its water power potential or enough water to last the city until the turn of the year. Two years ago the city signed a contract with the Appalachian Electric Power Co. for surplus power in emergencies, but when the time came to build the $85,000 substation the project was shunted aside because of the inability to secure critical materials.

WPB Will Release New Production Figure

United States war production, having reached a point at which information concerning it will be of discomfort to the enemy, WPB will shortly begin releasing over-all figures on production and shipments, employment, material consumption, inventories and resources, fabricating capacity, substitutions and general trends as an aid to American business for planning its operations.

First reports, due for release within a few days, will cover information collected by WPB and such co-operating agencies as the Bureau of Mines and the Census Bureau from the beginning of wartime restrictions on such information to the present. Others will follow until most major industries have been covered. When these industries have been brought up to date, subsequent reports keeping information current will be issued quarterly or monthly. Information will be released through business papers, trade associations, the Department of Commerce, and the U. S. Chamber of Commerce and the Committee on Economic Development.

WPB Chairman Donald M. Nelson warned against the assumption that the release of this information is evidence that the war "is as good as won," and added that "our effort must not be relaxed in any way."

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Shipshaw Developed to 800,000 Hp.

The "Shipshaw" power development of Aluminum Company of Canada (ELECTRICAL WORLD, Feb. 13, 1943, page 3) chief subsidiary of Aluminum, Ltd., has been completed to a capacity of over 800,000 hp. There remain only two more new units to install at the plant, to bring the total generating capacity to 1,000,000 hp. or well over this when the flow of water is above average. This addition will be made before the end of December.

In the interval it is planned to transfer two power units from the Chute a Caron plant near by the Shipshaw, in order to take advantage of the greater head of water. These waterwheels will bring generating capacity to well over 1,100,000 hp. and make Shipshaw one of the largest individual power plants in the world. The entire output of this plant is being absorbed in the manufacture of aluminum in the Arvida, Quebec, area, as well as nearly all the power produced at the Chute a Caron and Saguenay Power plants.

Resolution Offered For Entire Power Load

Intended to develop the Seattle City Light distribution system to a point where it can carry the entire electric light and power load of the city, a resolution to put the present Council on record in favor of such a move has been introduced in Council, where the members will take it under consideration for detailed study. Such resolution provides for refusal to grant renewal of Puget Sound Power & Light Co.'s franchise when it expires in 1952. The general sentiment of the Council is that such a measure should go before the people at an election before the Council takes binding action.

Councilmen pointed out that any action would be binding on the present Council only, but it would commit the present Council to a large City Light expansion program within ten years. The city now has an investment of $70,000,000 in its power system. Councilmen point out that City Light is now being extended by the addition to the Ross Dam at the Skagit, and if necessary, the city can draw upon Bonneville and Grand Coulee when surplus power is needed.

•

Electrical Credit Men Hold Annual Meeting

The 48th annual meeting of the Electrical Credit Association, Central Division, was held at the office of the association secretary in Chicago recently with only a few members present. Only an executive session of the association was held because of wartime conditions.

On recommendations of the nominating committee, L. B. Nelson of the Hamilton-Beach Co., Racine, Wis., was elected president and J. T. Drysdale, Jr., of the Triangle Industries Corp. was elected vice-president. As a member of the executive committee to fill the unexpired term of L. B. Nelson, resigned, the association elected H. C. Fraunhofer. S. S. Mandel of Metropolitan and Riley DeLano of Westinghouse Electric Supply were elected to the executive committee for three-year terms expiring in 1946.

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Labor-Shortage Areas Reduced in November

The list of acute labor-shortage areas was reduced during November from 76 to 68, the War Manpower Commission revealed this week, while areas of labor stringency or those anticipating an acute labor shortage in six months total 123.

Transferred from Group I to Group II, areas with acute shortages to those of stringency or expectation of shortages, were Orlando, Fla.; Allentown, Pa.; Tampa, Fla.; Burlington, Iowa; Ogden, Utah; Salt Lake City; Savannah, Ga., and Wilmington, Del. Butte, Mont., was transferred from Group I to Group III, an area in which a slight surplus will remain after six months. Cleveland, Clinton, Iowa; Knoxville and Richmond, Ind., were transferred from Group II to Group I. Biloxi-Gulfport, Miss., was added to the list in Group I.

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Capacitor Schedules Now Under WPB Division

WPB's radio and radar division has taken over scheduling of capacitors for power-factor correction from the power division, Office of War Utilities. Radio and radar is more directly concerned with the production of capacitors under present production scheduling plans.

MEETINGS

Northwest Electric Light and Power Association—Utilization section, Olympic Hotel, Seattle, Washington, December 10 and 11; accounting and business practice section, Heathman Hotel, Portland, Oregon, December 13-14. Berkeley Snow, executive secretary, 418 Spalding Bldg., Portland 4, Oregon.

Canadian Electrical Association—Annual winter conference of committees, Mount Royal Hotel, Montreal, Que., January 20-21. B. C. Fairchild, managing director, 804 Tramways bldg., Montreal, Que.

Previously Listed

American Society of Agricultural Engineers—Fall meeting, LaSalle Hotel, Chicago, Ill., December 6-8. Raymond Olney, secretary, St. Joseph, Mich.

19th Exposition of Chemical Industries—Madison Square Garden, New York, N. Y., December 6-11. C. F. Roth, manager, Exposition of Chemical Industries, Grand Central Palace, New York, N. Y.

National Association of Manufacturers—2nd War Congress of American Industry, Waldorf Astoria Hotel, New York, N. Y., December 8-10. J. M. Boyd, secretary, 14 W. 49th Street, New York, N. Y.

American Standards Association — Annual meeting, New York, N. Y., December 10. P. G. Agnew, secretary, 29 West 39th Street, New York, N. Y.

Pennsylvania Electric Association—Meter Committee, Benjamin Franklin Hotel, Philadelphia, Pa., December 10. Bradley M. Smith, chairman, P. O. Box 860, Erie, Pa.

Technical Valuation Society — Annual forum and business meeting, Building Trades Club, 2 Park Ave., New York, N. Y., December 11. W. C. Fisher, chairman, Room 516, 4 Irving Place, New York, N. Y.

American Society of Civil Engineers — Annual meeting Engineering Societies Building, New York, N. Y., January 19-21. George T. Seabury, secretary, 33 West 39th St., New York, N. Y.

American Institute of Electrical Engineers—National technical meeting Engineering Societies Building, New York, N. Y., January 24-28. H. H. Henline, secretary, 33 West 39th Street, New York, N. Y.

Sales Executives' Conference — Netherland Plaza Hotel, Cincinnati, Ohio, February 3-4. H. E. Dexter, secretary-treasurer, 50 Market Street, Poughkeepsie, N. Y.

NEWS BRIEFS

WHEN McLIN J. BROWN, Hillsboro, Ill., attorney, failed to collect $10,000 he alleged the Illinois-Iowa Power Co. owed him in fees, he reciprocated by not only refusing to pay for gas and electric services furnished his three business establishments but also persuaded the lower court in Montgomery to enjoin the utility from cutting off his gas and power. The Appellate Court promptly reversed the decision.

EXPENDITURES RUNNING into many millions of dollars are planned by the British Columbia Electric Railway Co. after the war, according to W. G. Murrin, president of the company. Postwar plans include the purchase of many new street cars, development of a huge hydro-electric power plant at Bridge River, B. C.; construction of new substations and general extension of its power and light system.

AT 5:45 P.M. ON A RECENT SATURDAY in Freeport, Texas, a violent tornado struck without warning from the southwest, killing two persons, injured 100 persons, destroyed 20 blocks of houses, caused power, light and telephone lines to fail. At 8 p.m. the tornado played a return engagement at Galveston, injuring 31 trailer and tourist cottage dwellers, some of which were catapulted 100 feet into the air.

CENTRAL MAINE POWER has thus far generated 86.9 percent of its output this year by hydro-electric plants, thus effecting a striking saving in fuel under present acute wartime conditions. Storage reservoirs on the Androscoggin and Kennebec rivers will stand at about 85 and 90 percent full on December 1, thanks to favorable rainfall and skilled load dispatching.

OWEN WARREN, a Lisbon Falls, Me., boy, sold over 900 tomato, cabbage and other vegetable plants raised in his electric hotbed last season, using twelve 25-watt lamps between March 19 and May 27, with thermostat control (60 deg. F.). Energy consumed totaled 405 kw.-hr., and service was tied in with a 1-cent water heating rate of Central Maine Power. Expenses including seeds totaled $6.04, receipts being over $20.

ELECTRIC MILK COOLERS are helping Maine farmers overcome ice and labor shortages, 140 "Escos" having been sold in the past twelve months on the Central Maine Power system, while twelve more await government confirmation. These outfits run twelve to fourteen hours per day and average ⅓ hp. in connected motor load, each.

6 good reasons why

L-M HEAVY DUTY LIGHTNING ARRESTERS ARE PROTECTING MORE LINES THAN EVER BEFORE

1 HIGH SURGE CAPACITY

The special L-M valve composition will handle high-amperage and long-tail surges equally well.

2 LOW IMPEDANCE

Due to its characteristics, the L-M valve material holds internal resistance (IZ drop) to low values at all surge currents.

3 MOISTURE-PROOFNESS

Double "elastic" sealing at top and bottom, controlled production and thorough routine tests result in highest, permanent moisture-proofness.

4 PERMANENCE OF CHARACTERISTICS

L-M valve material is chemically and electrically absolutely stable, does not change its characteristics in operation, assures same unfailing operation, after years of performance.

5 VISUAL-INSPECTION GLASS BODIES

Glass bodies, exclusive with L-M Arresters (Pat. No. 2,165,964) permit easy inspection of Arrester condition at any time without costly laboratory or field tests.

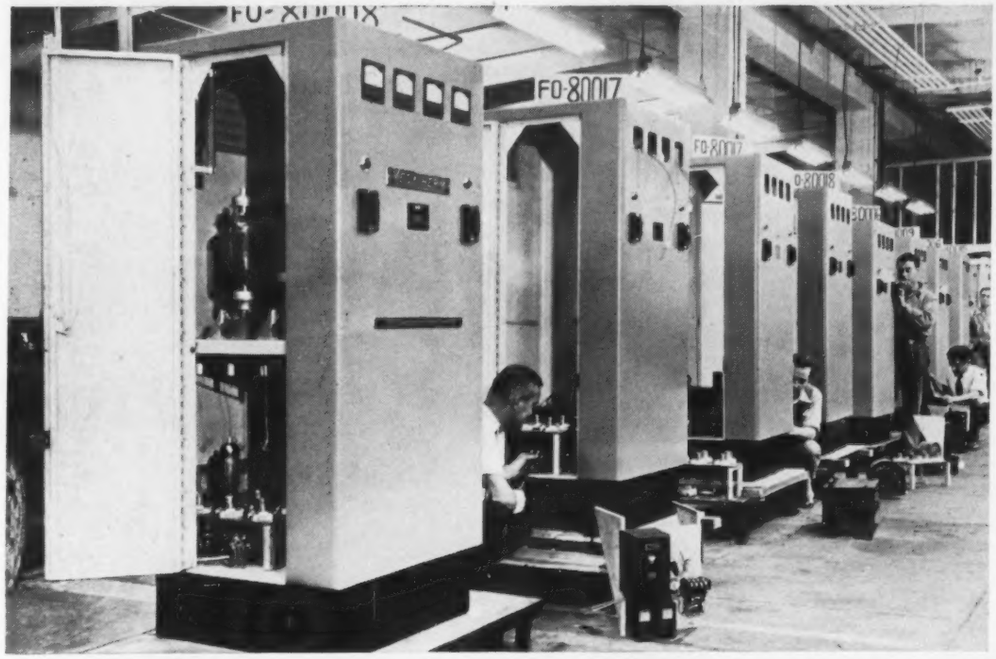
6 THE ISOLATOR FOR FEEDER-LOCK-OUT PREVENTION

Any arrester might become damaged at some time in service. The L-M ISOLATOR will then save you time and money because it will automatically cut off the faulty arrester from the line, preventing feeder lock-out or phase grounding — Only L-M Arresters have the ISOLATOR. (Pat. 2,315,320).

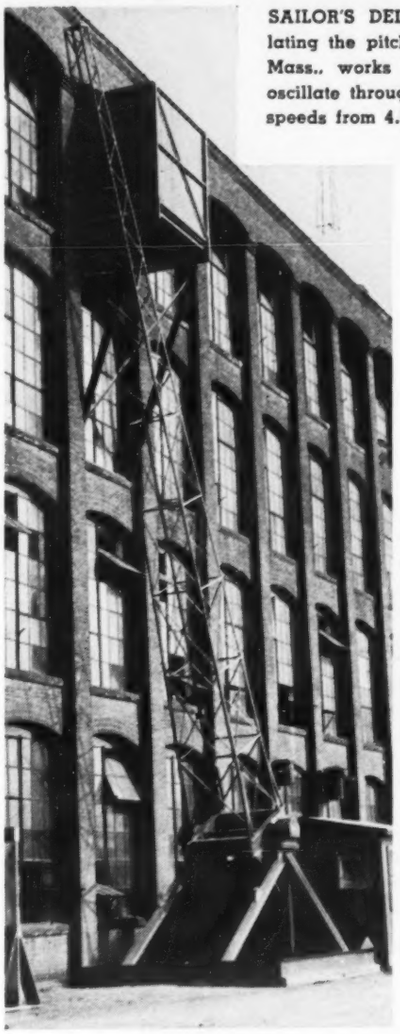
Detailed information further explaining and illustrating these features and the reasons why they contribute to better service are fully covered in L-M Bulletin 40151. Write for it or ask your L-M representative for a copy.

LM

LINE MATERIAL COMPANY



INDUCTION HEATING UNITS—Widening application of industry's new tool—high-frequency induction heating—is reflected in the lengthening assembly lines of Megatherm units being turned out at the plant of the industrial electronic products division, Federal Telephone & Radio Corp., Newark, N. J. The company is the manufacturing associate of International Telephone & Telegraph Corp.



SAILOR'S DELIGHT—To test certain war equipment under conditions simulating the pitch and roll of a vessel's mast top at sea, the East Springfield, Mass., works of Westinghouse company utilizes a rocking tower built to oscillate through an arc of 45 deg. from the vertical in each direction and at speeds from 4.5 to 10 seconds. At the maximum rate velocity at the midpoint of the swing reaches 45 m.p.h. Tower reverses at the end of each half cycle. Tower is 50 ft. high from center of oscillation, weighs only 600 lb. and has a 2-ton counterweight. It is supported by 12-in. I-beams and is operated by a 35-hp. motor through a Westinghouse-Nuttall oil well reduction gear unit. J. G. Ritter, engineer, developed the installation

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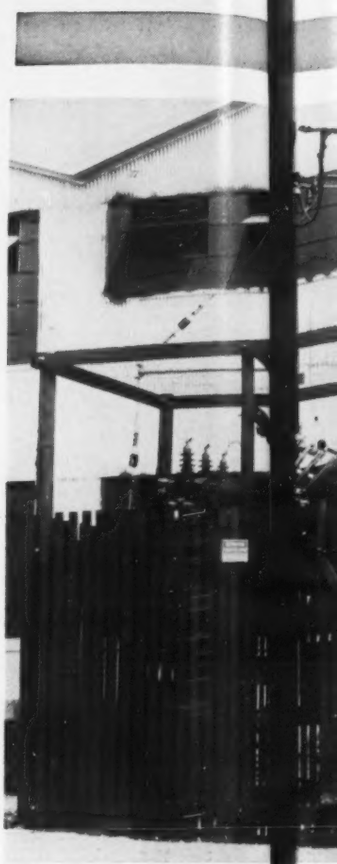


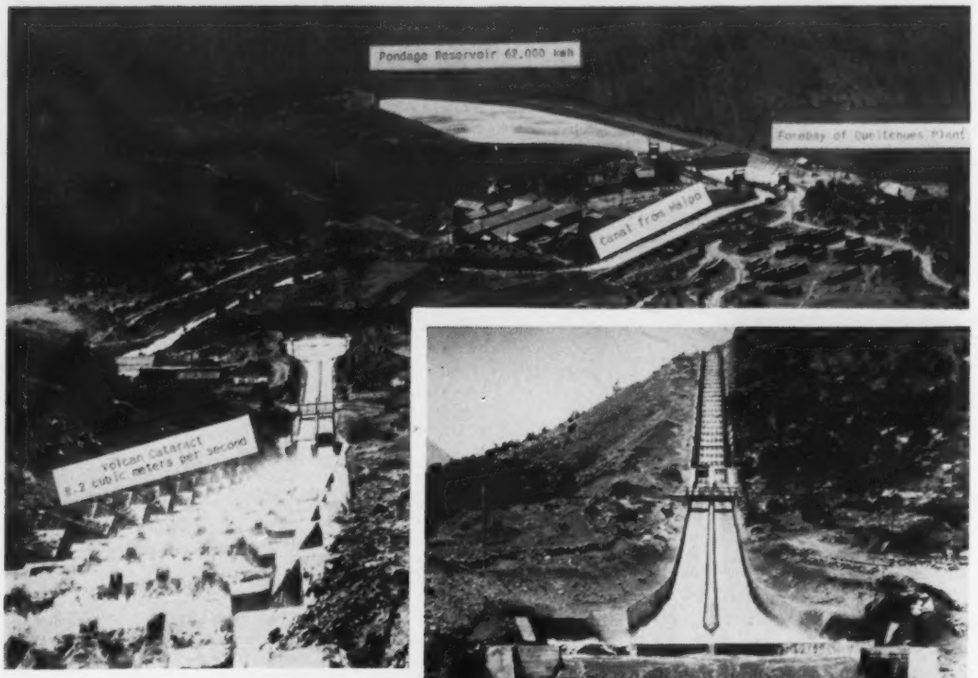
IN USTRY

PI URES

W SUBSTATION — Southern Co Edison Co. developed this w pe substation, which has a fra poles and structural timbers, inc ith a wood fence, to meet cri terial shortages. The picture sh ew type of load interrupter sw fuses which the company ha ed in several locations. Its ov stallation is less expensive tha nd disconnect switches and its ting capacity is higher than an itch of equivalent cost, ac- co H. M. Stewart, company distribution engineer

←

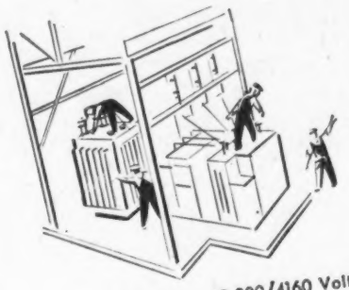
MO OWER PLANT—Capt. L. W. Ba of power division, Bureau of nd Docks, steps down from on cars during inspection of a w. mobile power plant built by l Electric. He is followed by Winne, G.E. vice-president in of apparatus engineering, and Lynch, of the company's se ngineering division, who su ed construction of the mobile unit



CHILE'S VOLCAN DEVELOPMENT — Cia Chilena de Electricidad Ltda of Santiago, Chile, is in process of constructing a new hydro-electric development—the Volcan—which will up capacity 13,000 kw. At the time the accompanying pictures were taken the penstock was just being assembled and the power house had not been started. During normal operation water to the power house approaches through penstock. When water is not required for power it bypasses the penstock and passes over a series of vertical steps called a cataract. Above is a view looking down on the lower end of the cataract. The other picture shows a view of the cataract looking up from its lower end. After the water passes through the Volcan power house it is discharged into the forebay of the Quelltehues plant, built in 1928 to divert water from the Maipo River, above the junction of the Maipo and Volcan rivers. It is expected that the unit (G.E.) will be shipped this fall and be ready for operation in May, 1944

DUNCAN ELECTRIC TWIN "E" AWARDS—The Duncan Electric Mfg. Co., Lafayette, Ind., recently received the Army-Navy "E" award for both of its Lafayette plants. Presentation was made by Col. J. G. Salsman, U. S. Army Air Forces, and Lieut.-Commander T. M. Kegley, USN. Fred Holmes, president of Duncan, and Jack Yeater, employee representative, accepted the awards on behalf of the company. Duncan's peacetime production is primarily on watt-hour meters

EQUIPMENT COST



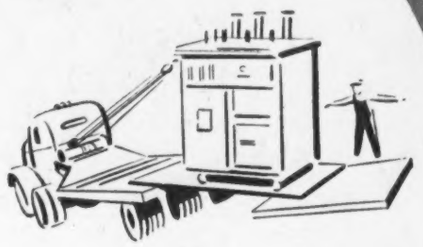
2000 Kv-a., 13,800/4160 Volt
OPEN-TYPE SUBSTATION

3—Single-Phase Power Transformers
1—Three-Phase Regulator
Metering, auxiliary transformers and switching equipment
Protective devices
Numerous other miscellaneous items

Steel structure
$15,062

PLUS
Extra cost for added ground space required

PLUS
Time required to erect structure and assemble many separate items



2000 Kv-a., 13,800/4160 Volt
CSP TRANSFORMER

Everything complete in one unit

No overhead structure required

$14,458

TOTAL COST

Saving in cost...at least $604.00 plus

IN DOLLARS AND CENTS, TOO

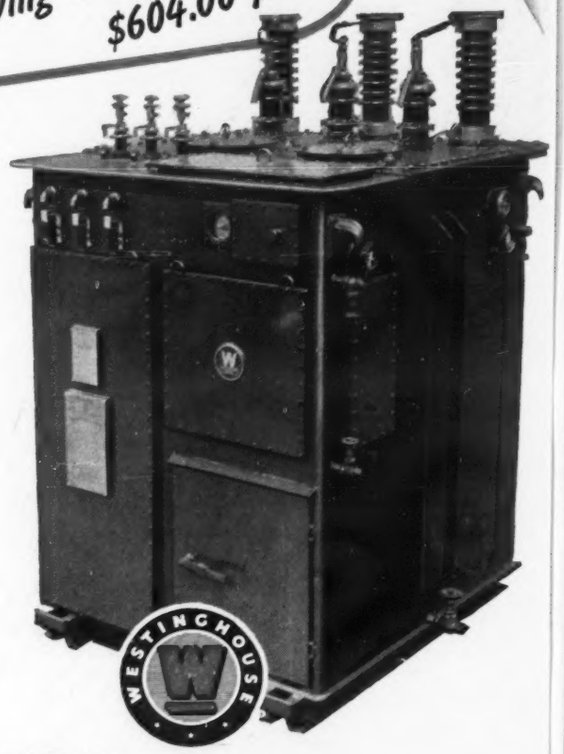
...it pays to pick
easy-to-order...
easy to install...
easy to move...
CSP's

A CSP Power Transformer performs all the functions of a conventional single-circuit substation . . . better . . . at less cost. For a given capacity and voltage rating, it will save up to 6% PLUS a substantial reduction in installation expense. Contractors have estimated this last saving as high as $1500.00.

CSP Light-duty Power Transformers meet the problems of present war conditions: they require less space, less man power and less critical materials to install. And if, or when, a load center shifts as many probably will after the war . . . the CSP Transformer can be shifted easily with it . . . 100% salvage.

Get full information on CSP Transformers to meet your requirements. See your Westinghouse representative or write Westinghouse Electric & Manufacturing Company, East Pittsburgh, Pa.

J-70420



Westinghouse

PLANTS IN 25 CITIES . . . OFFICES EVERYWHERE

POWER TRANSFORMERS **CSP**

Output Declines in Holiday Week

The output curve for the latest week, ended November 27, and including the Thanksgiving holiday, fell sharply from the record of the previous week. The amount of electrical energy distributed by the electric light and power industry for that week totaled 4,403,342,000 kw.-hr., compared with 4,513,299,000 kw.-hr., according to the Edison Electric Institute, source of the figures. Figures for the latest week compare with 3,766,381,000 kw.-hr., an increase of 16.9 percent.

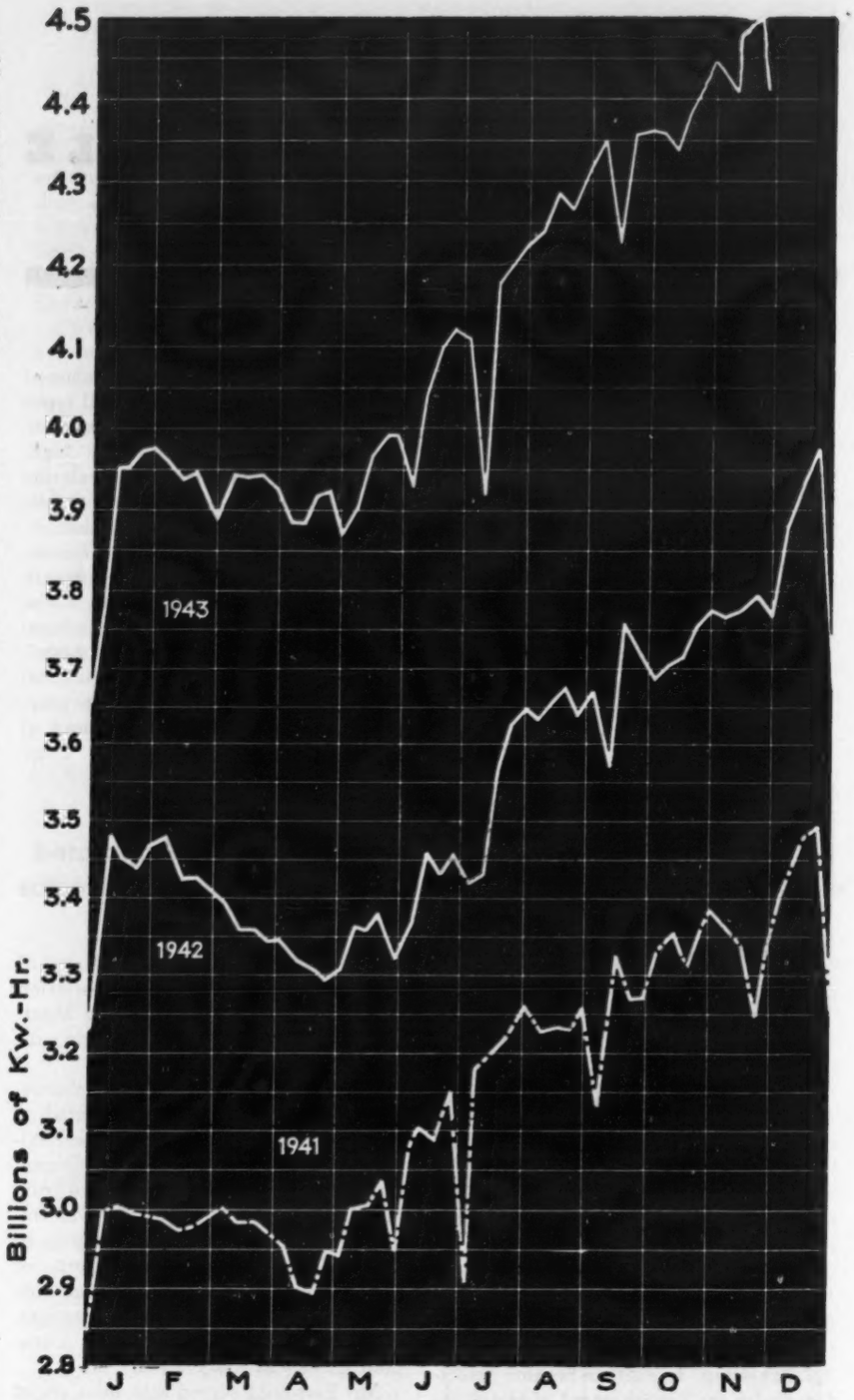
Six of the seven major geographic sections of the country contributed to the drop during the holiday week. Only one section, the Rocky Mountain, showed a percentage gain for the latest week over the previous week. Still leading the country in percentage gains over the 1942 week was the Pacific Coast area with 34.6 percent. The Southern States were in second place with 18.5 percent, replacing the mid-Atlantic, which was in second place the week previous. In third place was mid-Atlantic with an 18.1 percent gain. Lagging behind the rest of the country in percentage output gains over the 1942 week were the New England States, with 5.3 percent increase, and the West Central States, with 7.2 percent gain.

Weekly Output, Millions Kw.-Hr.

1943		1942		1941	
Nov. 27	4,403	Nov. 28	3,766	Nov. 29	3,339
Nov. 20	4,513	Nov. 21	3,795	Nov. 22	3,247
Nov. 13	4,482	Nov. 14	3,776	Nov. 15	3,348
Nov. 6	4,414	Nov. 7	3,762	Nov. 8	3,368
Oct. 30	4,452	Oct. 31	3,775	Nov. 1	3,380
Oct. 23	4,415	Oct. 24	3,752	Oct. 25	3,341
Oct. 16	4,382	Oct. 17	3,717	Oct. 18	3,313
Oct. 9	4,342	Oct. 10	3,702	Oct. 11	3,355
Oct. 2	4,359	Oct. 3	3,683	Oct. 4	3,330
Sept. 25	4,360	Sept. 26	3,720	Sept. 27	3,273

Percent Change from Previous Year

	Week Ending		
	Nov. 27	Nov. 20	Nov. 13
New England	+ 5.3	+ 7.7	+ 8.3
Mid-Atlantic	+18.1	+20.5	+19.0
Central Industrial	+11.5	+14.1	+15.1
West Central	+ 7.2	+ 7.9	+10.5
Southern States	+18.5	+19.9	+20.3
Rocky Mountain	+15.9	+15.5	+14.8
Pacific Coast	+34.6	+36.9	+33.3
Total United States	+16.9	+18.9	+18.7



September Energy Sales Up 17.6%

Sales of electric energy to ultimate customers in September totaled 16,122,317,000 kw.-hr., compared with 13,712,277,000 kw.-hr. in September, 1942, an increase of 17.6 percent, according to the report issued by the Edison Electric Institute.

Revenue from ultimate customers amounted to $261,045,200,* compared with $240,252,700 in September, 1942, an increase of 8.7 percent.

*Reflects results of bi-monthly billings.

Classification of Sales, September, 1943 and Change from 1942

Kilowatt-hour sales September	Million Kw.-Hr. 1943	1942	% Change
Residential or domestic	2,326*	2,156	+ 7.9
Rural (District rural rates)	328	355	— 7.6
Commercial or industrial			
Small light & power	2,505	2,322	+ 7.9
Large light & power	9,339	7,724	+ 20.9
Street & highway	168	157	+ 7.4
Other public authorities	826	384	+115.0
Railways and railroads			
Street & interurban	346	329	+ 5.2
Electrified steam	206	194	+ 6.2
Interdepartmental	78	92	— 15.5
Total to ult. customers	16,122	13,712	+ 17.6

For the twelve months ended September 30* the average annual use per customer advanced to 1,058 kw.-hr. from 1,015 kw.-hr. for the preceding year, an increase of 4.2 percent; the average annual bill to $38.62 from $37.35, an increase of 3.4 percent; revenue per kilowatt-hour dropped to 3.65 cents per kilowatt-hour from 3.68 cents, a decrease of 0.8 percent under the preceding twelve months.

NEWS ABOUT PEOPLE

Combustion Engineering Promotes W. H. Armacost

The board of directors of Combustion Engineering Co., Inc., New York, has elected Wilbur H. Armacost vice-president, to succeed the late F. H. Rosencrants in charge of marine activities of that company. He will also continue to supervise the design of industrial superheaters and economizers, as well as forced-circulation boilers, and will be responsible for the chemical recovery units and VU type steam generators.

Mr. Armacost is a graduate in mechanical engineering of Armour Institute of Technology, 1916, and during the next few years held several positions in the field of research and power plant testing. In 1920 he became associated with the Superheater Co. as designing engineer and in 1931 was promoted to chief engineer of its industrial department. When the functions of that department were merged, a few years later, with Combustion Engineering Co., he was designated as chief engineer of the superheater and economizer division of the latter company, later also becoming chief engineer of its marine department and in charge of the design of forced-circulation boilers. Concurrently, for several years prior to 1940, he also held the position of chief engineer of the Air Preheater Corp.

Mr. Armacost has made a number of trips abroad in the interest of all types of high-pressure boilers, and particularly the development of large high-pressure controlled forced-circulation boilers. He is the holder of many patents pertaining to steam generation.

Mr. Armacost has served on numerous technical committees of the American Society of Mechanical Engineers, is a member of the joint research committee of the A.S.M.E. and the American Society for Testing Materials on the effects of temperature on the property of metals and of the Society of Naval Architects and Marine Engineers.

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B. C. Fairchild Appointed CEA Managing Director

(See Front Cover)

Beverley C. Fairchild, secretary of the Canadian Electrical Association since 1931, with headquarters in Montreal, has been appointed managing director of that organization.

Mr. Fairchild was born at Simcoe, Ontario, in 1899 and was educated at Westward Ho College, Edmonton, Alberta, and the University of Michigan, Ann Arbor. Following graduation from the University of Michigan, he was employed on various construction jobs in Ontario and by the Power Corp. of Canada from 1926 to 1931 as construction accountant and field office manager. He then joined the staff of the Canadian Electrical Association.

Mr. Fairchild served as a pilot officer in the Royal Flying Corps and the Royal Air Force in the First World War. He joined the 2d (Reserve) Battalion, Victoria Rifles of Canada, in 1940, in which unit he is a company commander with the rank of captain.

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▶ JOSEPH L. DUDLEY has joined the staff of the Cochrane Steam Specialty Co., Boston, Mass. Mr. Dudley was formerly associated with Jackson & Moreland and with Stone & Webster Engineering Corp.

R. A. Dingman to Direct Industrial Relations

Roy A. Dingman has been appointed manager of industrial relations for Commonwealth Edison Co., according to a recent announcement by Edward J. Doyle, president of the utility. Martin P. Below was named assistant manager.

A graduate of the University of Wisconsin, Mr. Dingman entered the company's service in 1928 as a senior clerk in the employment division and six years later became a staff assistant to the manager of industrial relations. He was promoted to supervisor, personnel records and statistics, in 1936; assistant manager of industrial relations in 1937 and has been acting manager of industrial relations since last April.

R. A. Dingman

Also a University of Wisconsin alumnus, Mr. Below started his Commonwealth Edison career in 1924 as a student in the company's college graduate orientation course. After serving in various capacities in the budget bureau he was appointed force planning supervisor in 1935; superintendent, personnel division, in 1936; supervisor, personnel records and statistics, in 1937 and acting assistant manager of industrial relations last April.

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▶ MELVIN ARNOLD, advertising manager, Portland General Electric Co., is on leave of absence from his position with the company since November 15 to accept a position on the government committee for congested production areas. He is acting as assistant area representative for this committee, with headquarters in Portland, Ore. The committee, which is composed of representatives of WPB, WMC, Director of the Budget and other government agencies, functions directly under the e

ecutive office of the president to co-ordinate manpower and materials for the war program in congested areas. No announcement has been made by Portland General Electric Co. of any plan to replace Mr. Arnold for the period of his government service, which is indeterminate.

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Executive Appointments Announced by E.C. & M.

The board of directors of the Electric Controller & Manufacturing Co., Cleveland, Ohio, at its meeting last week, elected F. R. Fishback, chairman of the board; R. G. Widdows, formerly vice-president, was elected president, and N. R. Richardson and A. C. Dyer were elected vice-presidents.

Mr. Fishback has been associated with the Electric Controller & Manufacturing Co. since 1905 and has been president since 1925. He became interested in the commercial phase of the business and was appointed sales manager, in 1924 advancing to the position of vice-president and secretary. The following year he was elected president. For a number of years he has been active in the affairs of the National Electrical Manufacturers Association and in 1936 was elected to the presidency. He is a graduate of Rose Polytechnic Institute.

Mr. Widdows attended the University of Pennsylvania and has been with the company more than 33 years. He has been district manager of the New York office, sales manager from 1924 to 1939, and vice-president since 1925.

Mr. Dyer will continue as sales manager, the position he has held since 1939. A graduate of Carnegie Institute of Technology, he has devoted many years to the application of electric control to steel mill drives and is well known throughout the industry.

Mr. Richardson has been production manager since 1932 and will continue in this capacity in addition to assuming the vice-presidency. A graduate of Yale University, he has been with the company since 1924.

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▶ L. O. Fryer has been appointed assistant secretary and assistant comptroller of Graybar Electric Co. Mr. Fryer started his Graybar career as an accountant at San Francisco Graybar in 1922, was made service manager in 1930 and sales manager in 1937. In October, 1940, he was made secretary to the general sales committee at Graybar headquarters in New York. In 1941 he became assistant manager at Graybar Dallas, the position he held until his recent appointment.

Westinghouse Expands Air Conditioning Unit

To prepare for post-war expansion of air-conditioning activities, the Westinghouse Electric & Manufacturing Co. has announced the transfer of all heavy-duty air-conditioning and industrial refrigeration manufacture from its East Springfield, Mass., works to the Jersey City, N. J., plant of the Westinghouse Electric Elevator Co.

"We believe that air conditioning will become a more important industry in post-war America, and it is our intention that Westinghouse shall continue as one of the major producers in the field," said George H. Bucher, president. An important reason for making this move at this time, according to Mr. Bucher, is to release space for the present vital war work at the East Springfield Works of the appliance division. At the same time the accommodation of air-conditioning manufacture at the elevator company will not interfere with the current war production at that plant.

Frank C. Reed, vice-president of

Ross Rathbun

Westinghouse and president of Westinghouse Electric Elevator Co., announced the appointment of Ross Rathbun as manager of air conditioning and of Walker G. White to succeed Mr. Rathbun as general sales manager of the elevator company.

Mr. Rathbun joined the Westinghouse Electric & Manufacturing Co. in 1916 as sales engineer. In 1928 he became identified with the sales staff of the Westinghouse Electric Elevator Co. and in 1935 he was made general sales manager.

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▶ Martin E. Juhl, district manager for the Michigan Gas & Electric Co., at Dowagiac, Mich., has been named manager for the Lake Superior District Power Co. at Ironwood. He succeeds the late J. B. O'Neill. Mr. Juhl was formerly connected with the Lake Superior utility at Ashland and Park Falls.

▶ Arthur S. Albright, controller of the Detroit Edison Co., has been elected to membership in the Controllers Institute of America.

▶ H. W. Tenney, formerly assistant director of the Westinghouse Research Laboratories, has been named assistant to Thomas I. Phillips, vice-president in charge of the company's Pittsburgh divisions. In his new position Mr. Tenney will help co-ordinate vital wartime engineering activities. Joining Westinghouse in 1920 in the switchboard engineering department at East Pittsburgh, subsequently he entered the materials and process engineering department. In 1936 Mr. Tenney was named manager of the central engineering laboratory department, later becoming engineering manager of the new products division when it was organized in 1937. A year later he was made manager of the engineering laboratories and standards department, holding that position until appointed assistant director of the research laboratories in 1941. He is a fellow of the American Institute of Electrical Engineers.

OBITUARY

▶ Irving C. Wilkins, 49, assistant superintendent of distribution for the Haverhill (Mass.) Electric Co., died at his home in that city on November 18. He was a native of Georgetown, Mass., and entered the company's service in 1913 as a groundman.

▶ Frank A. Ross, senior vice-president of Stewart-Warner Corp., Chicago, died suddenly on November 17 at St. Luke's Hospital in that city. He was 60 years of age. In point of service Mr. Ross was the oldest executive with the corporation. He grew up with it, having been one of the nucleus around which the company was formed. His career began in 1908 as an engineer with the Warner Instrument Co., Beloit, Wis. With the formation of the Stewart-Warner Speedometer Corp. in 1912, which was formed by the consolidation of the Stewart-Clark Co. and the Warner Instrument Co., Mr. Ross went to Chicago as experimental engineer. In rapid succession he became assistant superintendent and then superintendent and works manager of the new corporation. He was a protege of J. K. Stewart, one of the founders of the Stewart-Warner Corp. During the first World War he was in charge of all munitions production for Stewart-Warner Corp.

MANUFACTURING-MARKETS

Westinghouse Sales Reach New High

Shipments of war materials in October by the Westinghouse Electric & Manufacturing Co. were the highest in the company's history, A. W. Robertson, chairman, recently reported.

Billings for the month amounted to $63,113,578, a new high, and an increase of 3 percent over last August, the previous high month.

New orders received by Westinghouse last month amounted to $110,888,403, or 29 percent more than in October, 1942. The company's backlog of unfilled orders at the end of October this year amounted to $976,101,040, compared with $889,528,642 at the same date a year ago.

"These figures," Mr. Robertson said, "certainly show that the production phase of this war is by no means finished, any more than is the fighting. I think this is brought home to us sharply as we prepare to observe the second anniversary of Pearl Harbor day."

Net income for the nine months to September 30, Mr. Robertson reported, was $14,491,608, after all expenses, taxes and other charges and after provision for renegotiation of war contracts. This compared with a revised net of $11,376,217 in the nine months to September 30, 1942.

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New G.E. Service Center Opened in Philadelphia

General Electric Co. officially opened its new Philadelphia appliance service center on November 17, when more than 300 electrical men and women inspected the big four-story building on Market Street. The building will serve as the parts and service headquarters in metropolitan Philadelphia for all home appliances manufactured by G.E.'s appliance and merchandise department.

According to the manager, G. H. Reid, the center will handle all servicing of G.E.'s major appliances in Philadelphia's metropolitan area, and will also serve as a small appliance parts supply depot for the entire Atlantic district.

The guests inspected the center's facilities during the afternoon, attended movies of the repair of small G.E. appliances and heard company officials outline the objectives G.E. has set for the operation of its Philadelphia station. The evening program was devoted to out-of-town dealers who service major appliances.

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Offer Elliott Stock

Offering has been made by F. Eberstadt & Co. of 52,957 shares of common stock of the Elliott Co., with plants at Jeannette and Ridgway, Pa., and Springfield, Ohio, at $14.50 a share. The offering does not represent new financing by the company, the stock having been acquired from a trust estate and certain other shareholders. It is the first distribution of the company's securities to the public.

NEW TRANSFORMER — Westinghouse designed this transformer for an Eastern utility. It is rated 21,000 kva., self-cooled, 120,300 wye/14,000 delta volts with four full capacity taps below rated voltage on the high side. Air blast fans start automatically when load exceeds 21,000 kva.

Dividends Announced by Manufacturers

Cutler-Hammer, Inc., has declared a dividend of 50 cents a share, payable December 15 to holders of record December 4; paid 25 cents in each of first three quarters.

Sylvania Electric Products, Inc., declared a dividend of 25 cents a share on the outstanding common stock, as well as an extra dividend of 25 cents a share on the common, both dividends to be payable on December 20, to stockholders of record at the close of business December 9, 1943.

Year-end dividend of 75 cents, payable December 24 to stockholders of record December 10, has been announced by Johns-Manville, making total dividends $2.25 for 1943, same as for 1942.

Directors of Philco Corp. declared a dividend of 20 cents per share of common stock payable December 13, to stockholders of record November 27. Previous dividend payments this year were 15 cents per share on March 12 and 20 cents per share on June 12 and September 13.

Worthington Pump & Machinery Corp. has announced the first dividend on its common stock since 1922 and the elimination of dividend arrearages on two classes of preferred stock. The common stock distribution, amounting to $2 a share, is payable December 20 to stockholders of record December 10. Accumulations of $3.50 a share on the 7 percent preferred and $3 a share on the 6 percent preferred was declared, payable December 15 to stockholders of record December 3. Regular quarterly dividends of $1.75 on the 7 percent preferred and $1.50 on the 6 percent preferred were declared, both payable January 1 to stockholders of record December 15.

Directors of the Aluminum Co. of America have authorized the distribution of $1 a share on December 10 to holders of the new common stock. The company paid dividends of $1 each on the old common stock in three preceding quarters this year, and since the stock was recently split up on a three-for-one basis the present declaration will bring the year's total dividends to the equivalent of $6 on the original common stock, the same as paid last year.

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Wins Police Corps Prize

Ward Leonard Electric Co., New York, has received from the Army an award for the efficiency and appearance of its auxiliary military police corps.

Fifty plants competed for the prize. The contest was under the supervision of Brig.-Gen. Ralph K. Robertson, commanding officer of Military District I.

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Manufacturers Issue Earnings Reports

Square D Co., in a report for the nine months ended September 30, subject to audit, year-end adjustment and renegotiation, shows a profit of $1,309,006, after reserve of $4,217,051 for federal income and excess profits taxes, reserve of $125,000 for post-war plant rehabilitation and reserve for renegotiation. This net is equal, after dividend requirements on the preferred stock, to $2.96 a share on the 421,360 shares of common stock.

F. W. Magin, president, stated that renegotiation proceedings for 1942 are still in progress, and that for the first nine months of 1943 provision has been made for a renegotiation refund estimated in the light of discussions of 1942 earnings. Amounts so provided are preliminary. The company's nine-month statement makes no comparison of earnings with those of the like period a year ago because no provision was made last year for renegotiation.

Other companies reporting earnings include:

ROME CABLE—September quarter, net profit, $175,129, or 92 cents a share, against June quarter net of $125,914, or 66 cents a share, and $51,620, or 27 cents a share, in September quarter a year ago. Six months to September 30, net profit, $301,043, or $1.58 a share, compared with $117,518, or 61 cents a share, for 1942 period.

WORTHINGTON PUMP & MACHINERY—Consolidated statement of operations, covering the nine months ended September 30, last showed net profit of $3,073,457 after all deductions, including taxes. The profit is equivalent to $9.38 a share on the common stock and compares with $2,018,687, or $5.70 a common share earned in the first nine months of last year.

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International G.E. Names Advertising Agency

International General Electric Co., Inc., Schenectady, N. Y., has appointed Williams & Saylor, Inc., New York, as its advertising agency. Several programs are planned for 1944, utilizing foreign magazines and in some cases dealer promotional material in the various Latin American countries. J. E. Peters, of the publicity division of International General Electric, is directing the company's advertising.

Field Reports on Business

Reports from most of the heavy industries continue favorable. Government requirements, particularly Navy, are calling for a wide variety of electrical supplies. Communication apparatus is still in pressing demand. Heating elements are selling well. Retail trade is exceptionally active, due largely to Christmas buying.

NEW YORK

In the New York metropolitan area Christmas shopping was again the outstanding feature of the retail trade, which was very active last week. Estimates indicated department stores had an average increase of 18 to 20 percent over the same week a year ago, with many individual stores having still greater sales gains. Macy's illuminated Christmas windows, with their mechanical Yuletide floats moving to music, continue to fascinate crowds of early Christmas shoppers.

It is predicted that this year's Christmas trade will surpass last year's record, despite wartime shortages of many articles. On a national basis, it is reported that 1943 dollar sales will reach a record high of $62,900,000,000, or 9.5 percent above 1942. These figures were estimated by the Department of Commerce.

Civil engineering construction volume for the short week due to the Thanksgiving Day holiday, according to the *Engineering News-Record*, totaled $36,523,000, 45 percent below the total for the corresponding week in 1942, and compares with $68,931,000 reported for the preceding week. Current week's volume brings the 1943 construction total to $2,885,384,000, which, on a weekly average basis, is 67 percent below the $8,932,207,000 for the 48-week 1942 period.

NEW ENGLAND

Plans are in the making to convert two buildings of a New England ordnance plant to the manufacture of spiral cable at an estimated outlay of $3,000,000. With the lifting of dimout regulations several Massachusetts municipalities are planning changes and extensions in street-lighting systems. An appropriation of $15,000 for additions to traffic control lights has been recommended in Newton, Mass., and plans have been approved for a complete renovation of the Belmont, Mass., system.

Small motor sales are spotty and buying of electrical equipment is more cautious among machine tool manufacturers. Fractional-horsepower motor sizes are in great demand, however, and a large backlog of orders awaits factory deliveries. George Lawley & Sons, Boston, has been awarded a contract to build eight small Navy tankers. Gamewell Co., Newton Upper Falls, Mass., will extend a fire alarm system at a New England airport at a cost of $4,383. Six electric food conveyors were recently sold for a Navy installation by the McDonald Company, Boston, and the National Company, Malden, Mass., has received additional contracts for furnishing vacuum tube sockets.

Supplies for communication apparatus still are in pressing demand. Heating elements are selling well. Portable water stills, 750-watt electric ovens, capacitors and Variacs are typical electrical specialties which are being handled by manufacturers here in encouraging lots. Insulating tape manufacturers are active bidders on supplies for the Navy.

CHICAGO

Chicago, for some months a No. 2 labor shortage area, was last week put on a 48-hour week by the Regional War Manpower Commission. The order, which went into effect on December 1, affects all employers of eight or more persons except those engaged in agriculture or with certain other exemptions. Employers have until January 15 to comply. A similar order affecting Milwaukee and three other Wisconsin areas is being considered. It is estimated that the application of the 48-hour week in Chicago will release about 100,000 persons for new jobs to relieve the manpower shortage.

Survey of electrical manufacturers in the area reveals, however, that they will benefit little from the new order since most of these concerns are already operating on a 48-hour week basis.

War production has boosted average weekly wages of men in Illinois industry above $50 for the first time in history, it was announced by the State Department of Labor this week. Between September 15 and October 15 the average weekly wage for manufacturing and non-manufacturing industries was $50.91. Employment advanced 2.9 percent in the Chicago metropolitan area during this period. Payrolls were up 3.2 percent. A further survey of local business indices shows that percentage gains for October were smaller than September for electric power production, department store sales and surface lines passenger traffic. A 10 percent decline in building permit valuations in October contrasted sharply with a rise of 72.8 percent reported for the previous month.

Early Christmas shopping in the week ended November 20 boosted department store sales in Chicago 17 percent above the corresponding week a year ago.

PACIFIC COAST

Government bids for electrical supplies, particularly Navy, reflects the stepping up of the war in the Pacific. Recent requisitions have covered carload quantities of such construction items as hardware and knobs and such maintenance material as soldering supplies. Typical items are a million split knobs and 3,000 toy-wattage transformers.

WPB has sanctioned the resumption of work on Anderson Ranch Dam irrigation project near Boise, and WMC will furnish the necessary labor. Original award was $9,986,203 and work was 50 percent completed at time of revocation by WPB last December. Coast stock conditions are much improved and most sizes even of rubber-covered wire are now fairly procurable.

Total value of building permits for the seven Western states was $20,366,000, the highest since January, 1943, and is 10 percent over October last year.

Orders include four pole line hardware awards, aggregating $44,000, for Ellenberg, Wash., delivery for Bonneville system; $40,000 of generator sets for a camp at Rice, Calif., and award of $33,093 for Westinghouse X-ray equipment for Astoria naval hospital.

SEC DECISIONS—HEARINGS

The Securities and Exchange Commission, in a series of orders issued last week affecting electric utility companies:

APPROVED a Southern Colorado Power Co. plan providing for a single class of common stock and removing it from the control of its parent, Standard Gas & Electric Co. The plan will result in an annual interest saving of $185,000 and will simplify the company's capital structure. About 95 percent of the new common stock will be given to present preferred-stock holders and the remaining 5 percent will go to owners of the publicly held class A common stock.

APPROVED A PLAN filed by the Pennsylvania Electric Co. of Johnstown for the cancellation of 34,000 outstanding shares of series A 5.10 percent cumulative preferred stock. Each series A share would be exchanged for one of a new 34,000 share issue —series B 4.40 percent cumulative preferred plus $1 in cash. The commission also approved the company's plan to sell the number of series B shares not exchanged by November 27 to the Mellon Securities Corp. and the First Boston Corp. at $108.75 plus accrued dividends.

APPROVED Central Power & Light Co.'s plan to issue and sell $25 million principal amount of first mortgage bonds, due 1973, and devote the proceeds to the redemption of its outstanding 3¼ first mortgage bonds, due 1969. The commission shortened to six days the period for inviting bids in compliance with the competitive bidding requirements of the Holding Company Act.

PERMITTED TO BECOME EFFECTIVE a proposal of the North American Co. to pay a dividend on its common stock with $25 par value common shares of the Pacific Gas & Electric. One share of Pacific stock will be paid on each 100 shares of North American's outstanding common stock. Cash will be paid at the rate of 29 cents for each 1/100th of a share of Pacific stock, based on the $29 market price as of October 29, the date on which the dividend was declared.

APPROVED THE PAYMENT out of capital by Commonwealth & Southern Corp. of a dividend of $1 a share on its 1,482,000 shares of preferred stock. The order was dated November 26, 1943. The dividend as declared by the company is payable on the 28th day after approval by the commission to stockholders of record on the 14th thereafter. SEC noted that the payment was similar in principle to those previously authorized to be made from capital.

APPROVED A PROPOSED $42,000,000 bond issue by the Utah Power and Light Co., but directed the concern to reduce its capital structure to a single class of common stock and eliminate from the property accounts of the company and two subsidiaries alleged write-ups and other inflationary items estimated to exceed $32,000,000.

Hearings Scheduled

DECEMBER 1: Hearing on proposal of General Gas & Electric Corp., a subsidiary of the Trustees of Associated Gas & Electric Corp., to pay out of capital or unearned surplus a quarterly dividend on its $5 prior preferred stock for the quarterly period ended December 15, 1942.

DECEMBER 7: Hearing on application by Northeastern Water & Electric Corp. for an order declaring it has ceased to be a holding company.

DECEMBER 9: Hearing on the United Public Utilities Corp.'s proposed disposal of its subsidiary, Louisiana Ice Service, Inc., in compliance with a SEC divestment order of March 4, 1942, under the geographic integration clause of the Holding Company Act.

DECEMBER 10: Hearing on a proposal of Associated Electric Co., and its wholly owned subsidiary, Indiana Gas Utilities Co., to dissolve Indiana Gas Utilities and transfer its assets to Associated Electric because the subsidiary no longer serves any useful purpose.

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SEC Staff Opposes Standard Gas Plan

The Securities and Exchange Commission was requested recently by its public utilities division staff to disapprove the plan filed voluntarily some time ago by Standard Gas & Electric Co. The purpose of the plan, submitted by the utility, was primarily to effect compliance with the corporate simplification provisions of Section 11 (b) of the Holding Company Act.

As submitted to the SEC, the plan called for a cash payment to the note and debenture holders of $29,601,100, representing one-half of the principal amount of the notes and debentures; a distribution of substantially all of Standard's holdings of common stock of California Oregon Power Co. and of Mountain States Power Co. and of new common stock, series A, which represented 28.04 percent of the total new common to be issued.

Recommendations of the staff are that the plan be not approved unless the 28.04 percent of the new series A common now earmarked for the note and debenture holders be increased to 33.33 percent; the allocation of 55.39 percent for the $7 cumulative preference be reduced to 51.32; that of the $6 cumulative prior preference cut from 12.98 to 12.02 percent, and the 3.59 percent now allocated to the $4 cumulated preferred revised downward to 3.33 percent.

Utility Reports

	Net Income 1943	1942
*Arkansas-Missouri Power	$223,626	$239,857
*Central Ohio Light & Pwr.	278,721	245,427
*Cincinnati Gas & Electric	3,921,320	3,367,223
*Columbia Gas & Electric and subs	12,463,034	7,568,988
*Community Public Service	518,027	507,968
†Connecticut Light & Power	3,739,601	3,549,858
*Dayton Power & Light	1,966,695	2,027,468
†Detroit Edison and subs	8,273,302	8,769,322
†Houston Lighting & Power	3,144,838	2,662,440
*Kansas Power	201,135	119,882
*Metropolitan Edison	4,104,686	3,250,398
*Northern States Power (Delaware)	4,974,804	5,148,721
*Union Electric (Mo.) and subs	7,664,119	8,430,097
*Virginia Elec. & Power	4,276,535	3,708,722
*Wisconsin Electric Power	4,150,182	3,695,472

*Twelve months ended September 30.
†Twelve months ended October 31.

Utility Sale Upheld by Supreme Court

The Missouri Supreme Court, acting on an appeal filed by Attorney-General Roy McKittrick, has upheld an order of the Missouri Public Service Company authorizing the sale of the property of the Laclede Power & Light Company of St. Louis to the Union Electric Company of Missouri.

The court held that the Attorney-General had no legal right to intervene or seek an appeal from a decision of the Cole County Circuit Court, which upheld the ruling of the commission and proceeded to try the case on its merits. The sale of the power company is a major factor in the reorganization of the Laclede Gas Light Company of St. Louis, which has been approved by the Public Service Commission but is still pending before the SEC.

The high court held that the state commission was justified in treating Laclede Power and Union Electric as separate units for rate purposes until the unification of the systems is completed and the effect of the merger is determined.

McKittrick, in his intervening petition, had contended that there was no showing of public benefit from the merger or to the customers of the two companies. Judge George R. Ellison, who wrote the opinion, ruled that this was a question of fact unsupported by evidence.

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Abandons Refund Plan

Indiana Public Service Commission has announced it has dropped its proposition that electric, telephone and gas utilities now paying excess profits tax to the federal government be induced to make refunds to patrons. The commission held that it lacks legal authority to compel such refunds and set out that utilities uniformly objected to the plan.

Third N. Y. Utility Cuts Minimum Charge

New York's Public Service Commission last week announced a new line extension plan by the New York State Electric & Gas Corp. under which the minimum monthly charge is reduced to $2 per customer regardless of the length of the extension. Under the existing schedule the minimum monthly charge increases for extensions beyond 660 feet per customer. The revision will result in savings, chiefly to rural and farm customers, the commission said, of more than $35,000 annually. The plan becomes effective November 8.

Similar plans providing lower charges for line extensions have recently been allowed by the commission for the Niagara Hudson system and the Rochester Gas & Electric Corp. With the addition of New York State Electric & Gas territory, about 85 percent of the franchise area in the state, outside of New York City, is now covered by liberalized plans under a uniform minimum monthly charge. Total savings to users are estimated at $100,000 annually.

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Fishers Island Electric Allowed Note Issue

The Public Service Commission has authorized Fishers Island Electric Corp. to issue notes in the amount of $181,347, the funds to be used in part payment for diesel generating equipment installed by the company at a cost of approximately $250,000. The company serves electricity on Fishers Island, Suffolk County, situated on the eastern end of Long Island Sound about 2½ miles from the Connecticut shore. The loan matures in 1965 and is to be paid at the rate of $10,500 annually, covering principal and interest.

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Ban Extensions for Christmas Displays

No temporary extensions to furnish service to an electric lighting display for decorative or ornamental purposes relating to the celebration of Christmas may be erected under the terms of supplementary order U-1-G, the Office of War Utilities ruled this week in Direction No. 1 to the order. The direction was issued as part of the OWU campaign to eliminate all use of electricity for Christmas lighting except that indulged in within private homes.

Sales Opportunities

FLORIDA—Gulf Power Co., Pensacola, plans extensions in transmission line, including expansion in power substations and other operating facilities. It is understood that project will have a priority rating.

MICHIGAN—Nash-Kelvinator Corp., 14250 Plymouth Rd., Detroit, now in production for ordnance for government, will carry out expansion in two plants, comprising additional buildings, with machinery and electrical equipment. Cost estimated at $830,000, with financing by Defense Plant Corp. Proposed to begin work soon.

OREGON—Columbia Metals Corp., Securities Bldg., Seattle, Wash., has selected site for proposed new plant for production of alumina from clay. It will comprise group of one-story buildings for processing and general production, equipped for output of about 50 tons of finished material per day. Also storage and distributing structures, laboratory, administration building, machine and repair shop, and miscellaneous units. Machinery will be eelctrically operated, with initial connected load approximating 500 kw. Power supply will be secured from transmission lines of Bonneville Power Administration, Portland, which will extend such lines to plant site, where power substation will be located. Entire project is estimated to cost about $4,500,000, and will be financed by Defense Plant Corp. A priority rating has been secured, and work is scheduled to begin early in 1944; bids for construction and equipment are expected to be asked in January. Chemical Construction Corp., 30 Rockefeller Plaza, New York, N. Y., a subsidiary of American Cyanamid Co., same address, will design plant and supervise erection.

WISCONSIN — Town Council, Mauston, plans installation of motor-driven pumping machinery, with controls and auxiliary equipment, in new pumping station for water system. Bids are scheduled to be asked at early date. Application will be made for a priority rating. General Engineering Co., Portage, Wis., is engineer.

MISSOURI—Civil Aeronautics Administration, Washington, D. C., and City Hall, Kansas City, has plans maturing for new airport, comprising hangars, shops and miscellaneous structures, with mechanical and electrical equipment. A power substation is planned with distribution system; lighting system will be installed. Proposed to ask bids in January. No estimate of cost announced.

CALIFORNIA — Henry J. Kaiser Co., Latham Square Bldg., Oakland, will make expansion and improvements at one of yards to provide facilities for construction of new Victory ships for U. S. Maritime Commission. Work will include three new outfitting docks, machine and repair shops, warehouses and other structures, with mechanical and electrical equipment. Additional power substation equipment will be installed. Entire project will cost close to $5,000,000, and will require several months for completion.

TEXAS—Celanese Corp. of America, Inc., 180 Madison Ave., New York, N. Y., plans new plant for production of acids and industrial chemicals; tract of about 300 acres of land has been secured. It will consist of several large production units, with storage and distributing buildings, laboratory, administration building, repair shops and miscellaneous structures, with machinery and electrical equipment for heavy output. A power substation and boiler house are planned. Project is estimated to cost about $5,000,000 and will be financed with company funds. It will have a priority rating.

IOWA—Water Dept., Ossian, plans installation of motor-driven turbine pumping unit, capacity about 200 gal. per min., with controls and accessories, for water system. Proposed to ask bids soon.

KENTUCKY—TVA, Knoxville, Tenn., has secured authority from WPB to develop hydroelectric power project at Kentucky Dam, including installation of four hydraulic turbines, electric generators, switchboard room equipment, transmission lines and other operating facilities.

MICHIGAN—Albion Malleable Iron Co., Albion, manufacturer of castings, etc., will make extensions in plant for increased output for government, including additional buildings, with machinery and electrical equipment. Cost estimated about $1,500,000, with financing by Defense Plant Corp. Proposed to carry out work soon.

WASHINGTON — Department of Public Utilities, Tacoma, has renewed application to WPB for a priority rating for construction of Alder hydroelectric generating plant, forming part of second Nisqually municipal power project, now under way. New station is estimated to cost about $2,000,000. Entire development will represent investment of close to $19,650,000.

MARYLAND—Navy Department, Washington, D. C., has authorized extensions in certain naval and naval air training stations, including shops, warehouses and other buildings, with mechanical and electrical equipment. Also barracks, mess halls and miscellaneous structures. Additions will be made to electrical distribution lines, substation facilities, service connections, etc. Entire project will cost about $1,244,000, and will be carried out under direction of Bureau of Yards and Docks, Navy Department, Washington.

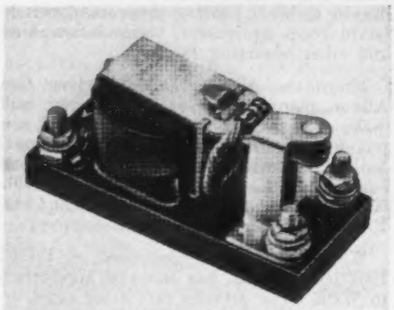
OHIO—Industrial Rayon Corp., 98th St. and Walford Ave., Cleveland, will make extensions in local mill for increased production of high tenacity rayon yarns for tire cord manufacture, including new one and two-story main manufacturing building and number of additions to existing structures, with machinery and electrical equipment. Additional power substation facilities will be installed. Entire project is estimated to cost about $5,000,000 and will be placed under way soon. Wilbur Watson & Associates, Inc., 4614 Prospect Ave., Cleveland, is architect and engineer. Company has work under way on similar expansion program at branch mill, estimated to cost close to a like amount. Both projects have priority rating and will be financed from company funds.

TEXAS—Southwestern Power Administration, Denison, Lee Simmons, manager, plans construction of new transmission line; connection will be made with high-tension system of Oklahoma Gas & Electric Co., which will secure power supply from this source. Power substation and switching station is planned. It is understood that project will have a priority rating. No estimate of cost announced.

NEW EQUIPMENT

Relay

Designed for use where precaution must be taken against unintentional operation



"Type 12 AXX" shockproof relay; supplied with series coils for any direct current or shunt coils for 12 or 24 volts, d.c. **Struthers-Dunn, Inc.**, 1321 Arch St., Philadelphia, Pa.

of contacts, new shockproof relay is said to be capable of withstanding acceleration tests of better than 90 gravitational units.

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Rubber Bucket

"Flexite" rubber pouring bucket; capacity, 3 gal.; weight, 3½ lb. **B. F. Goodrich Co.**, Akron, Ohio.

Suitable for use in industrial plants, new rubber pouring bucket, made of a soft compound of about 60 durometer hardness, is said to be so flexible it can be crushed and any solidified liquid cracked loose and easily removed. Secure anchorage of handles and reinforced gripping head, enlarged for easy glove-grip, are helpful in preventing spilling.

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Resistance Wire

"Wyndaloy 10-8" precision resistance wire; standard sizes in ribbon, strip and wire. **Wyndale Mfg. Corp.**, 1203 Cornell Ave., Indianapolis, Ind.

Resistance wire of silver base composition containing manganese and tin is available for applications in meters and precision instruments. The alloy can be produced with controlled temperature coefficients and particularly with high negative temperature coefficients. Principal properties are stated to be: Resistivity in microhms per centimeter cubed ranges from 55 to 44, depending on amount of cold work and upon heat treatments; elongation from 12 to 2 percent, depending upon treatment; highly corrosion resistant; strength ranges from 50,000 to 85,000 psi.; density, 9.58 grams per centimeter cubed. It can be supplied with negative temperature coefficient of resistivity of minus 0.000030 to 0.000055 or with zero temperature coefficient over a temperature range of 0 to 50 deg. C.

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Micro-Positioner

Micro-positioner for pneumatic motor valves is designed especially for use where the operating conditions may make the responses uncertain, slow or unsatisfactory. Device is actuated by air pressure changes as slight as the equivalent of ½ in. of water and can compel valve stem movements as small as 1/1,000 in., it is claimed. Flexure type bearings, in place of pivots, are said to eliminate effects of mechanical vibration without loss of sensitivity.

"Vernier Valvactor" (mounted on a "Stabilflo" valve). **The Foxboro Co.**, Foxboro, Mass.

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Spot Welder

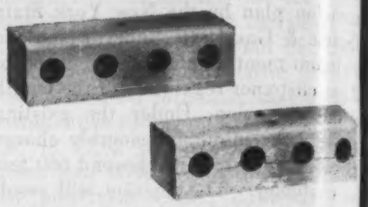
"Type PS2R-1" spot welder; rated 100 kw.; capacity for aluminum (two thicknesses), 0.016-in.-0.064-in.; for corrosion resisting steels (two thicknesses), 0.016-in.-0.080-in. **Sciaky Bros.**, 4915 W. 67th St., Chicago, 38, Ill.

Radial-type gun spot welder, specially designed for aluminum and light alloys employs the stored energy principle and variable pressure cycle. Cables are mounted to the gun on horizontal water-cooled copper bars. Control cabinet, main welding reactor, monorail and special copper bars connecting the gun to cables are built as a self-contained unit. This unit is mounted on a stationary column and pivots on a vertical axis.

BUYING ELECTRICAL EQUIPMENT? — McGraw-Hill's *Electrical Buyers Reference* is a convenient place to look first for manufacturers' product data, names and addresses.

Sockets

For cold-cathode fluorescent lighting lamp sockets have been developed to permit installation of tubing in fixtures for direct ceiling lighting. One of the sockets has a built-in disconnect switch to



Lamp sockets: two- and four-gang (illustrated). **Jefferson Electric Co.**, Bellwood, Ill.

open the circuit when the cover is removed. Placement and replacement of the tubes are made with power disconnected.

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Cable

Type "737" soft temper copper coaxial cable; ⅞ in. outside diameter; inner conductor ¼ in. diameter; bead spacing 4 in.; for frequencies from 100 kc. to 1,000 Mc; available in lengths up to several thousand feet. **Victor J. Andrew Co.**, 363 East 75th St., Chicago, 19, Ill.

Used for carrying high-frequency power, coaxial cable is said to have a low-loss ceramic (steatite grade G) bead insulator and depends on air or gas for the insulation. Manufacturer gives the following constants: surge impedance 64 ohms; capacity 17.3 micromicrofarads per foot; inductance 0.0708 microhenry per foot; bending radius 12 in.

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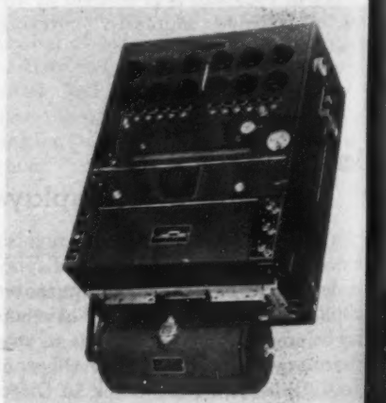
Oscillograph

New general-purpose oscillograph has a moving chart of sensitized paper driven from an internal magazine into an external record receiver by means of a governor-controlled drive mechanism mounted within the case. By means of a quick-change transmission, 16 record speeds covering a range of 120 to 1 can be instantaneously selected, it is claimed. External record receiver can be removed from the oscillograph at any time for development of records it contains.



"Type S-8" oscillograph; supplied with 12, 18 or 24 galvanometers or independent recording channels; standard record speed range, ½-40 in. per second. **Hathaway Instrument Co.**, 1315 S. Clarkson St., Denver 10, Colo.

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The plan provides a practical means of making periodic, systematic analysis of circuits and equipment. Uncovers potential weaknesses . . . suggests ways to correct them . . . prevents overloading of lines.

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